



## Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

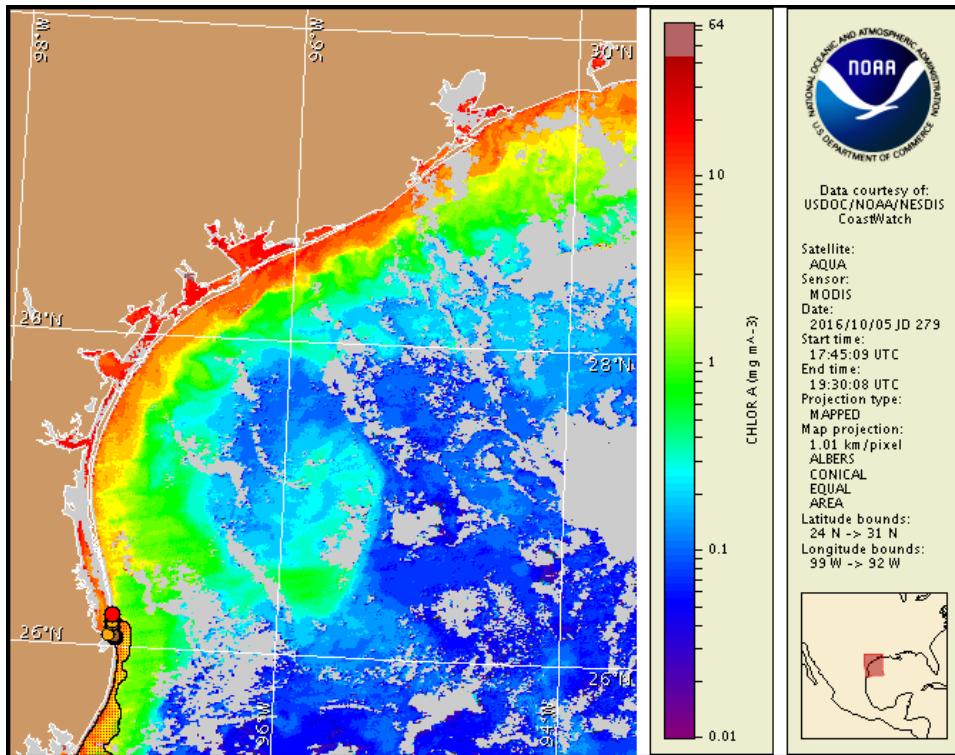
Thursday, 06 October 2016

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, October 3, 2016



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 26 to October 5: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

[http://tidesandcurrents.noaa.gov/hab/hab\\_publication/habfs\\_bulletin\\_guide.pdf](http://tidesandcurrents.noaa.gov/hab/hab_publication/habfs_bulletin_guide.pdf)

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

<http://www.tpwd.state.tx.us/landwater/water/envconcerns/hab/redtide/status.phtml>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

## Conditions Report

*Karenia brevis* (commonly known as Texas red tide) ranges from not present to high concentrations along the Texas coast in the Padre Island National Seashore to Rio Grande regions. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, October 6 to Tuesday, October 11 is listed below:

**County Region: Forecast (Duration)**

**Padre Island National Seashore region:** Low (Th-Tu)

**Mansfield Pass to Beach Access 6 region:** Low (Th-Tu)

**Beach Access 6 to Rio Grande region:** Moderate (Th-Tu)

**Bay region-Lower Laguna Madre to Laguna Vista:** Moderate (Th-Tu)

**All Other Texas Regions:** None expected (Th-Tu)

Check [http://tidesandcurrents.noaa.gov/hab/beach\\_conditions.html](http://tidesandcurrents.noaa.gov/hab/beach_conditions.html) for recent, local observations. Over the past few days, reports of respiratory irritation have been received from the Beach Access 6 to the Rio Grande region.

## Analysis

**\*\*Due to the upcoming federal holiday, the next bulletin will be issued on Tuesday, October 11.\*\***

*Karenia brevis* concentrations range between 'not present' and 'high' along the Texas coast from Aransas Pass to the Rio Grande (TPWD; 9/26-10/6). In the Aransas Pass to Padre Island National Seashore (PINS) region, sampling from the Texas A&M University's Imaging FlowCytobot, located on the Port Aransas ship channel, indicates 'not present' to 'very low a' *K. brevis* concentrations (TAMU; 10/3-6). In the PINS and Beach Access 6 to Rio Grande regions, water samples collected indicate that *K. brevis* has decreased with only up to 'low' concentrations identified (cell counts not shown on map; TPWD; 10/3-6). Detailed sample information and a summary of impacts can be obtained through Texas Parks and Wildlife Department at:

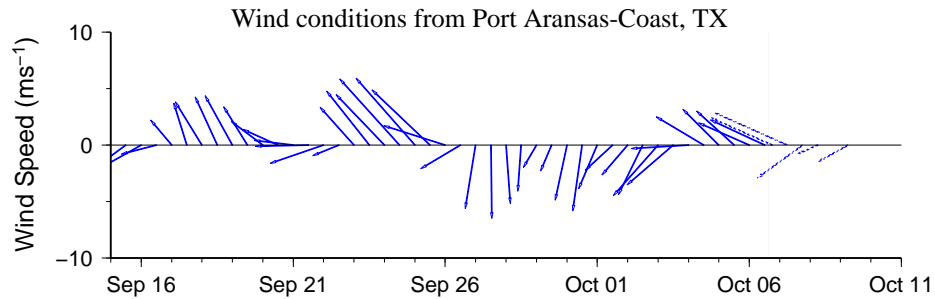
<http://www.tpwd.state.tx.us/landwater/water/envconcerns/hab/redtide/status.phtml>.

For information on area shellfish restrictions, contact the Texas Department of State Health Services.

Recent MODIS Aqua imagery (10/5; shown left) is partially obscured by clouds along- and offshore Galveston Island region, limiting analysis. Elevated to high chlorophyll (2-15 µg/L) is visible along- and offshore from Sabine Pass to the Mustang Island region, but elevated chlorophyll in this region is not necessarily indicative of the presence of *K. brevis* and may be due to the resuspension of benthic chlorophyll and sediments along the coast. The bloom seems to have transported south over the past few days, with small patches of elevated to very high chlorophyll (2 to >20 µg/L) visible along- and offshore the northern PINS region and from Beach Access 6 to approximately 180 km south of the Rio Grande. Continued sampling in this area is recommended.

Forecast models based on predicted near-surface currents indicate a maximum transport of 150 km south from the Port Aransas region, 150 km south from PINS Mile Marker #15, and >150 km south from Brazos Santiago Pass from October 5-9.

Kavanaugh, Lalime



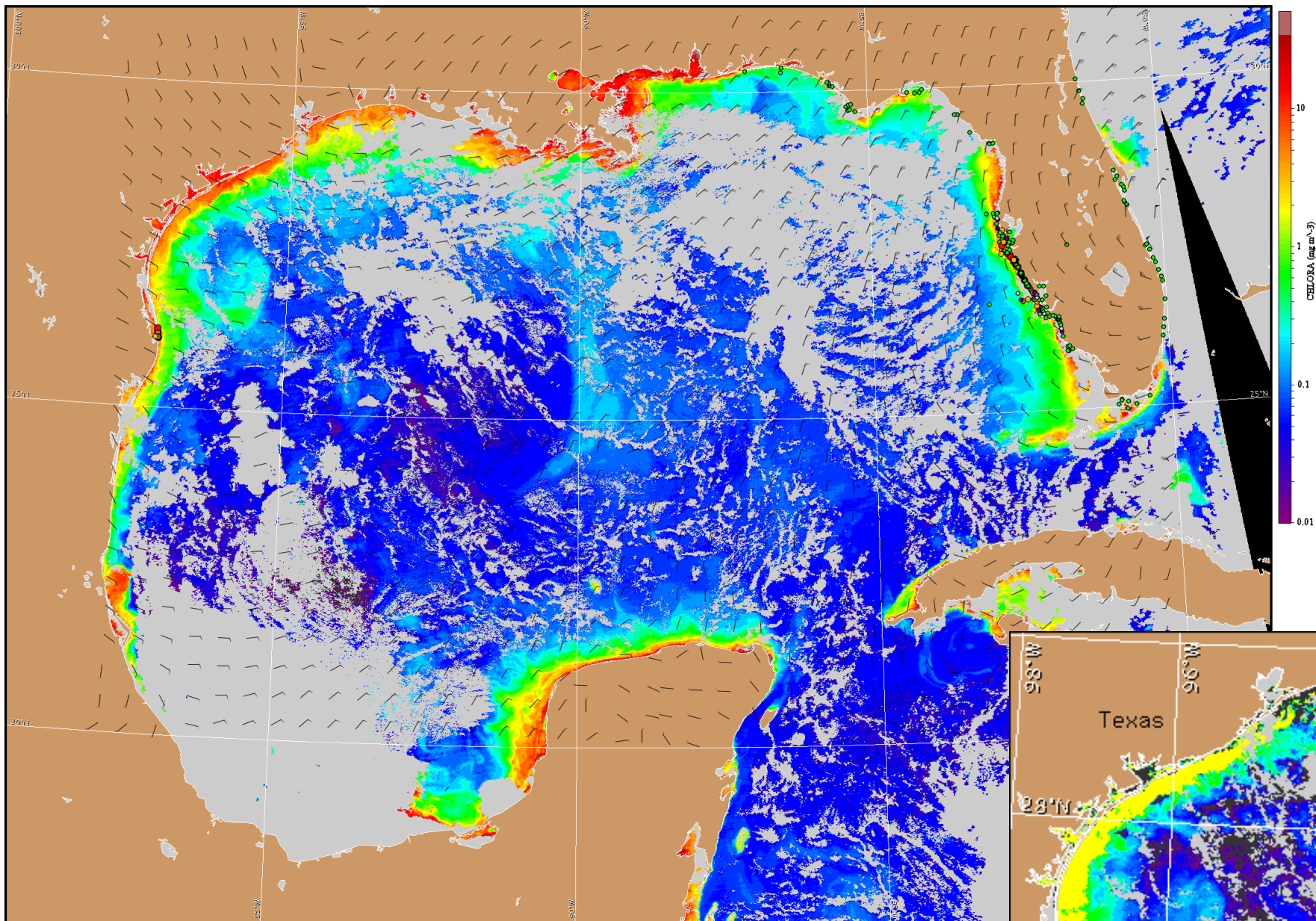
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

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## Wind Analysis

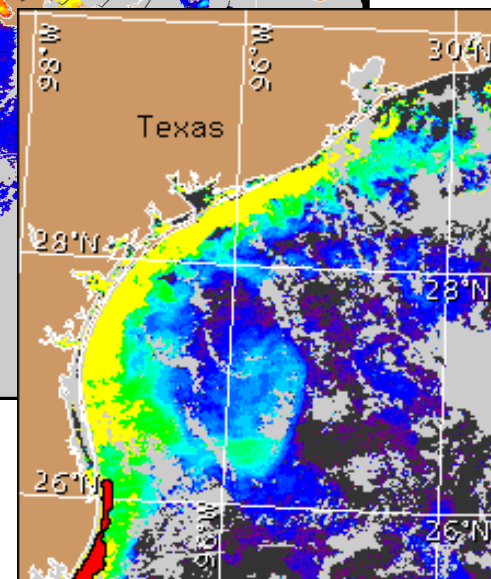
**Baffin Bay to Port Aransas:** East winds (5-15kn, 3-8m/s) today through Friday night becoming northeast winds (5-15kn) after midnight through Monday. East winds (5-10kn, 3-5m/s) Monday night.

**Port Mansfield to Rio Grande:** East winds (7-12kn, 4-6m/s) today through early Friday morning becoming northeast winds (8-14kn, 4-7m/s) through Friday night. North winds (11-16kn, 6-8m/s) Saturday shifting northeast (7-17kn, 4-9m/s) late Saturday morning through Monday night.



Satellite chlorophyll image and forecast winds for October 7, 2016 06Z with points representing cell concentration sampling data from September 26 to October 5: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).